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DIY Tactical Forum » Gear Making » Sewing Circle » Topic: Chest Rig Base, w/PALS Grid



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Author

Topic: Chest Rig Base, w/PALS Grid (Read 9257 times)



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Chest Rig Base, w/PALS Grid

« on: November 18, 2007, 10:11:20 AM »

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OK this time we'll build a basic chest rig with just PALS webbing. I wanted to show a few techniques for sewing a pouch base together. Again, this is A way, and there are many others.

To start with, we're gonna layout and cut the base pieces. A word about layout. With PALS webbing it's all about the spacing so we start there. I want a four mag pouch layout with room on the sides for additional pouches as required. So starting at one end, tick off 3/8" (seam allowance), 4 1/2" (side pouch), 3" (1 M-4 mag) x 4, 4 1/2" (SP), and 3/8" SA. In our case this all comes out to about 22". For height, I want something about the same height as my mag pouches, so I'm gonna go with 6", plus 3/8" x 2 for SA, which gives us 6 3/4". Obviously if you have different size mags or want a different number of them you can layout accordingly. I also mark 3/8" around the edges to help sew them later.



After laying out and cutting out a front and back piece, lay them inside out(outsides facing each other inside)and sew together, using about a 1/4" SA. I am using #69 Ranger Green thread, 7-8 spi



(stitches per inch) with a number 22 needle. Top tension is set fairly hard for the webbing to follow. The material is the Ranger Green cordura that Mike has for sale here on the site. Nice stuff at a good price. I sew three sides together, leaving one side open to flip "rightside" out. Notice also that the corners are clipped which helps form them later. There are many ways to join to pieces together with an internal seam but this seems to be the best method I've found.



After sewing together you flip it "rightside" out. Use your hand, a "fid" or screwdriver to push the seam out to the stitch line, forming the corners as you go. Flatten it out and take several measurements to ensure it's an even dimension all the way around. If you leave too much "suckback" inside when you top stitch, the dims will be off.



Now starting at one side, top stitch around the perimeter, about 1/16" ED (edge distance). There are many ways to do this. I stick my hand in there and press the material out to the inside stitch line. I then fold it over, keeping pressure on it until it's flat on the bed. I then plunge the needle and sew down about 2" or so and repeat the process. The 3/8" guideline I previously applied gives me a good indication of where I'm at. I try to sew on it evenly all the way around. SO you are watching two things. The 3/8" guideline, and the ED of 1/16", which works out to about 3 rows of cordura weave. I set my presser foot so it just splits the edge of the fabric and the needle stays at three weave "rows". Work carefully and slowly. Also make sure the material doesn't "roll" one way or the other making one "lip" bigger or smaller than the other.

A word about custom vs commercial sewing. This technique is very slow, "by hand" basically. They would laugh you out of a production shop. But the difference in quality is there for those that are willing to pay for it.



After you are finished top-stitching, measure in several places. Make sure it is still 22" x 6 3/4" all the way around.



« Last Edit: March 10, 2009, 12:04:33 PM by DIY Tactical »

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Basic Member
Guru



Re: Chest Rigs 101

« **Reply #1** on: November 18, 2007, 10:55:12 AM

»

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Now we'll layout our PALS grid. To review, you need 1 1/2" spacing between tacks horizontally, with 1" spacing between rows vertically. So we are going to do 3 rows of 14 spaces. I just layout by



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hand and tick mark. Others here have made nice templates for this work.



Now we'll start adding the hardware. I'm going to use SR (side release) buckles on each corner so I can use different harness assemblies. I'm using Foliage Green GTX (ghillie Tex) hardware. The front shoulder harness attach points will be 1 1/2" hardware so we'll cut two pieces of 1 1/2" webbing, in this case some older "camo green" webbing which is all I have at the moment. I want to do a 1 1/2" Box "X" pattern so with clearance for the buckle I need the webbing to be about 4 1/2" long. Sew the ends.



Slip the webbing through the hardware evenly and mark out a 1 1/2" tick mark for your pattern. Use this line to line up with the top stitch on the base. Now layout where you want the buckles to go. I put them in the middle of the second pouch (from center), which keeps the webbing out of the way if you are direct sewing pouches on. It also hits the shoulders about right. Now lay your webbing in place on the base. A word about box "X" patterns. I start on the load-bearing wall or side because I'm going to add another stitch line, for three rows of stitching along this side. Stitch your box all around the perimeter, 1/16" ED. Then stitch your first diagonal. Now overstretch the bottom line. Then stitch your second diagonal. Then overstretch the start, turn and stitch it again (for a total of three rows). I add this extra step to my Box "X" for additional strength. BTW, remember you are on the backside of the piece, so any logos on the hardware should be facing UP at this time. I think it just looks better.



And both front buckles done. Check and make sure they are centered on the second pouch midline, so in this case the PALS webbing will tack on their centers.



« Last Edit: March 10, 2009, 12:04:58 PM by DIY Tactical »

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polarweasel



Re: Chest Rigs 101

« Reply #2 on: November 18, 2007, 11:17:37 AM »

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Stay tuned, more to come later.

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Re: Chest Rigs 101

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Basic Member
Journeyman



Posts: 63
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Basic Member
Guru



Posts: 889
Liked: 7



« **Reply #3 on:** November 18, 2007, 01:07:10 PM »

Another great how-to so far!

Question... What do you use to put your name on the fabric? Is it a stamp, or singed in, or what?
Very nice.

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Re: Chest Rigs 101

« **Reply #4 on:** November 18, 2007, 06:30:43 PM »

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OK, let's finish up. I use a std ink stamp to mark my gear. I like the mil-spec look to it, reminds of old school issue gear.

Now we'll add the side and diagonal buckles. Cut 4 lengths of 1" webbing, about 4 1/2" for doing 1 1/2" Box "X"s again. Slide the webbing through the buckles and make your 1 1/2" tick mark.



On the sides, line up flush with the bottom, and using your tick mark, line up with the stitch line on the side of the base. Again, start the pattern at the highest stress point and stitch your Box "X". And again remember to face the writing on the buckles up.



Both sides done.



Now we'll do the diagonals. To keep it simple we'll just split the angle at 45 deg. Notice you loose a little length because of the dead space in the corner. You can cut longer to accomodate this if you want. In this case, we'll just adjust our pattern length.



Both diagonals done. All hardware installed



« Last Edit: March 10, 2009, 12:07:02 PM by DIY Tactical »

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Liked: 7



Re: Chest Rigs 101

« Reply #5 on: November 18, 2007, 06:46:43 PM »

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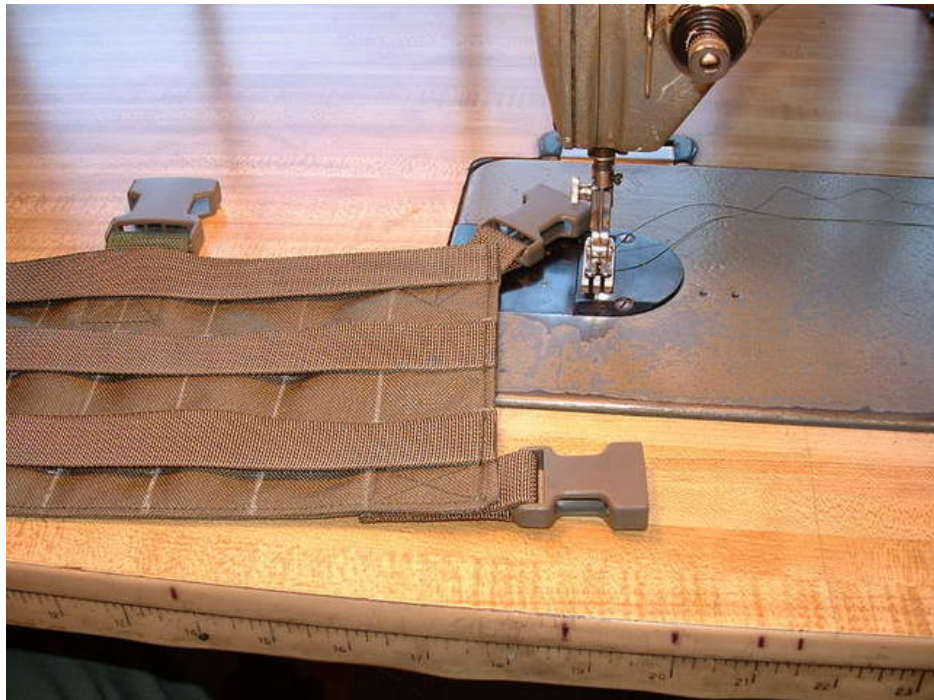
OK, now let's get our PALS grid on. Cut three pieces of 1" webbing to size. Sear the ends.



There are many ways to do this. On a long, linear pattern like this, I prefer to tack the center row down first. If you don't have a bar tacker then use your regular lock stitch in a "Z" pattern, 3 passes overlapping. With heavier top tension, I find it helps to apply a little more bobbin tension when reverse stitching. I work vertically, pulling a little slack and moving down to the next row without cutting thread. After all three rows are done, I cut and move to the next one. When completely finished I will "clean" the part by snipping all the threads.



Next I tack down the ends. Here I have cut to length, seared and sewed down. You may wish to tuck under the ends and sew.



Now I finish out the rows, working from the centerline outboard on both sides. Work carefully, and spot check dimensions as you go.



That's about it for this version. All you have to do now is make some straps or a "X" panel and you're GTG. Make some mag pouches of your choice and you have a nice unarmored grab 'n' go rig.

« Last Edit: March 10, 2009, 12:07:28 PM by DIY Tactical »

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☐ **Disturbed**

Official Man Dance Judge
DIY Forum Moderator
Guru

Moderator

Gear Locker



Re: Chest Rigs 101

« **Reply #6** on: November 18, 2007, 10:11:30 PM »

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Dude your a fucking legend.

For the Z Stich do you start in the middle of the 1" or at the top?

For those that can't grasp it if you don't want the seared ends showing use the same length webbing and fold 3/8" at the non buckle end and sew as shown.

Edit: You are now the stickied thread guy.